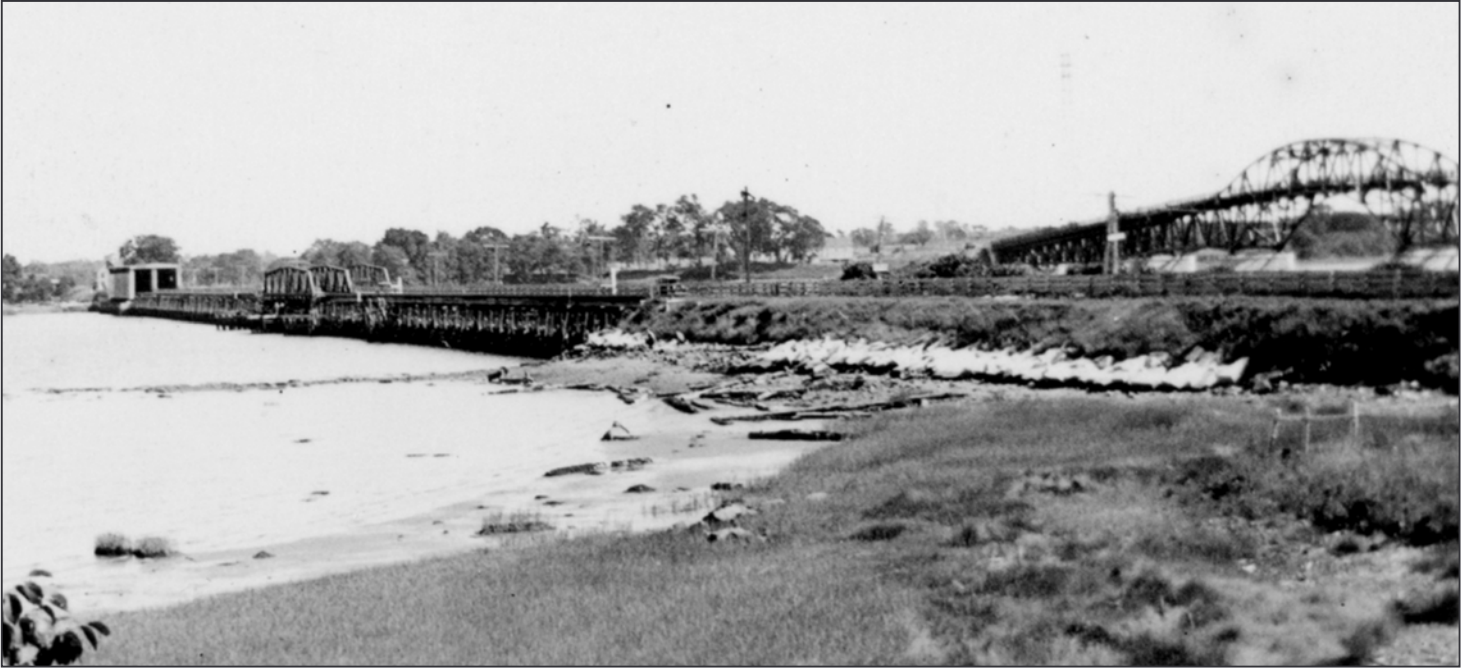


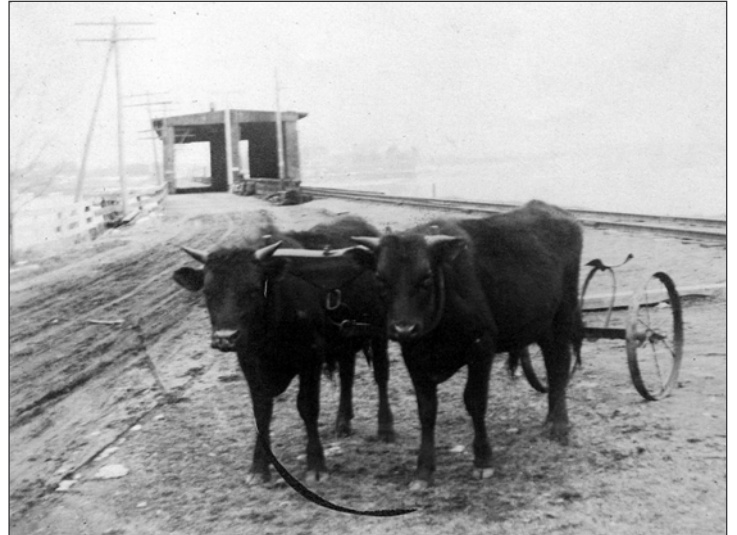
General Sullivan Bridge, 1934



The unique photo above taken from Hilton Park in Dover shows the old railroad bridge side-by-side with its replacement, the General Sullivan Bridge. The photo was likely taken in 1934.

Frank Jones was instrumental in building the old railroad bridge that connected Dover to Newington in order to gain better access to inland grain crops for his brewery operations in Portsmouth.

Opened in 1874, the bridge had a railway for trains; a roadway for carriages, animals, and people; and a swing draw for river traffic.



The photo above and the one to the left show views of the bridge from the Newington side.



General Sullivan Bridge, 1934

The following information about the historical significance of the General Sullivan bridge is from:

National Historic Context and Significance of the General Sullivan Bridge Dover, New Hampshire, Richard M. Casella, Engineering and Architectural Historian, Historic Documentation Company, Portsmouth, Rhode Island, October 2005

“The General Sullivan Bridge is an important early example of a continuous truss highway bridge in the U.S. and its design and construction contributed significantly to the advancement of 20th century American bridge technology.

Research has identified and defined the early development period of continuous truss highway bridges in the United States as being from 1927 to 1937. This period was preceded by a ten-year period beginning in 1917 during which time the continuous truss railroad bridge was developed.

The General Sullivan Bridge is one of four major bridges of the same type, style and time period designed by the firm of Fay, Spofford and Thorndike, that as a group significantly influenced future continuous truss highway bridge design in the areas of technology, aesthetics and construction methods. Fay, Spofford and Thorndike (FS&T) remains in business today.

The contract for design and construction supervision of the Little Bay Bridge was given to FS&T by the New Hampshire Toll Bridge Commission on April 11, 1933 and by July 27 the plans for the superstructure were complete and advertised for bids. Foundation construction began July 27, 1933 and on September 5, 1934 the bridge was opened to traffic.

Engineering News-Record called the General Sullivan Bridge and the companion Ballamy River trestle bridge "exceptional structures, which are notable in design and particularly for the construction methods employed."

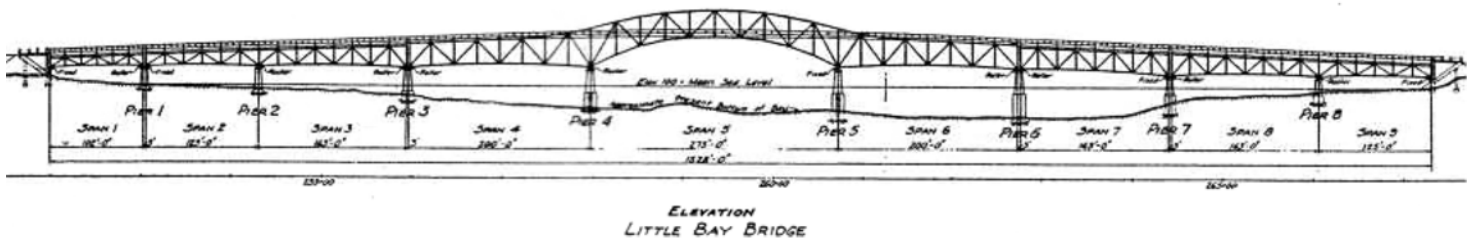


Looking towards Dover with the houses along the Dover shore and Hilton Park. Building bridges over the fast moving tides of the Piscataqua River and Little Bay is not for the faint of heart. Look how close the staging is to the top of the piers and the water level.



(Above) From Dover looking towards Newington. The old railroad bridge can be seen on the left of the new construction. The photo below is on the Dover shore.



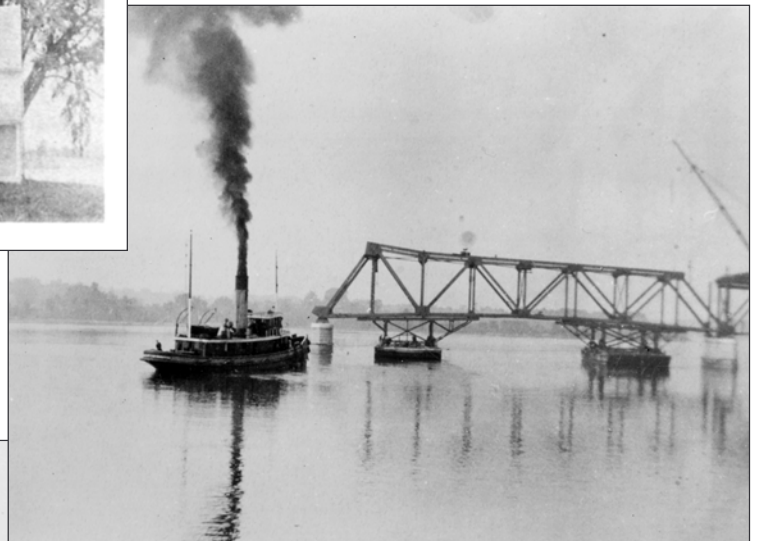


Main span of 275 feet, vertical clearance of 40 feet, continuous unit of 675 feet, length over all of 1,528 feet



The "Nancy Drew House" (left photo) was torn down in 1933 to make way for the General Sullivan Bridge. Many families occupied the house, including the Charles Dame and Manning Hoyt families.

Floating in a new section on two barges. The coal-fired "Mitchell Davis" tugboat is in the middle of the two photos below and to the right. The swing draw in the old railroad bridge can easily be seen at the tug's bow in the bottom photo.



National Historic Context and Significance of the General Sullivan Bridge Dover, New Hampshire

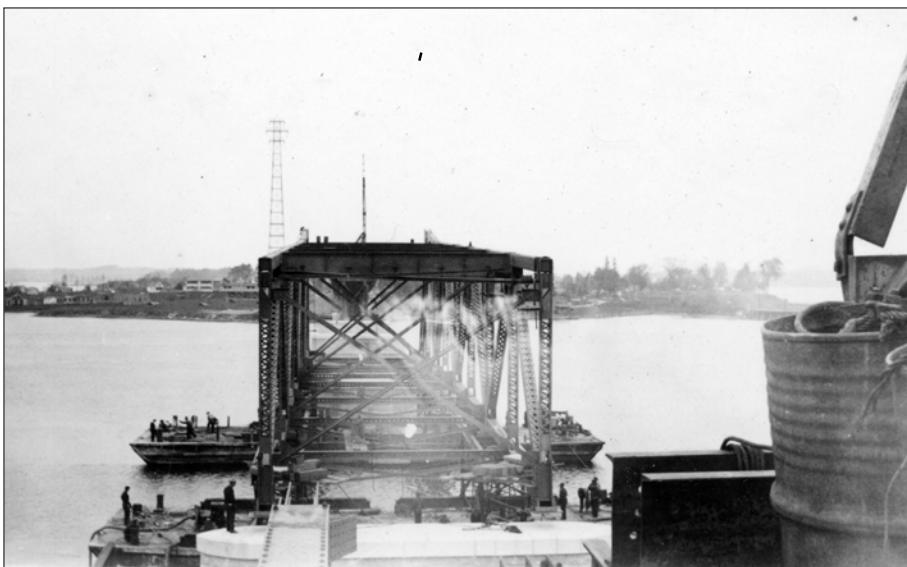
“The design mimicked the acclaimed Lake Champlain Bridge with the same innovative arrangement of deck side trusses and arched center thru truss that reduced the height and cost of the approach grades while achieving the necessary high-level channel clearance. The Little Bay Bridge helped establish, a markedly reduced economical span length for the continuous truss.

Although overlooked in the engineering literature at the time, the design of the Little Bay Bridge was particularly notable for its main span length of 275' and continuous unit length of 675'. These lengths approached nearly half the length of the Lake Champlain and French King bridges and may have constituted the shortest continuous arched truss built to date. The addition of a very aesthetically appealing truss design that could be built with the cantilever construction method and prove economical for medium span lengths was an important advancement.

Andrew Peter Ludberg, was employed by the Lackawanna Steel Construction Corporation as Resident Engineer in charge of the steel superstructure on the Little Bay Bridge. Ludberg possessed a "remarkable skill in mathematical analysis and insight into the elastic behavior of structures, especially those of the 'higher' and indeterminate type," and it likely because of those abilities that he was assigned resident engineer on the Little Bay Bridge project. On April 11, 1934, during his routine morning inspection of the steel work, Ludberg stepped on an unattached section of concrete formwork on Span 3 and fell to his death. He was the only fatality resulting from the construction of the General Sullivan Bridge.”



Looking toward the Dover shore as two barges float in a new section.



Below, taken from the Newington Shore is the finished General Sullivan Bridge with the old railroad bridge still behind it.

